IN THE CLAIMS

The claims are not amended herein, but are provided for convenience.

1. (Original) A system for use in wirelessly transmitting a communication signal to a remote transceiver, said system comprising:

an array of transmit antenna elements arranged in a predetermined pattern;

a direction determination unit to determine a direction of the remote transceiver;

a transmit beamformer coupled to said array of antenna elements to generate a transmit beam in the direction of the remote transceiver; and

a power control unit to determine an antenna gain related parameter associated with said transmit beam generated by said transmit beamformer and to adjust a transmit power level of said system based on said antenna gain related parameter.

2. (Original) The system claimed in claim 1, further comprising:

a duty cycle unit, coupled to said power control unit, to determine an average transmit duty cycle of said system over a predetermined time period and to deliver said average transmit duty cycle information to said power control unit, wherein said power control unit uses said average transmit duty cycle information to adjust the transmit power level of said system.

3. (Original) The system claimed in claim 1, wherein:

said power control unit adjusts said transmit power level of said system to comply with mandated transmit power limits.

4. (Original) The system claimed in claim 1, wherein:

said array of transmit antenna elements, said direction determination unit, and said transmit beamformer are each part of an adaptive antenna arrangement.

5. (Original) The system claimed in claim 1, further comprising:

an array of receive antenna elements that are arranged in a predetermined pattern for use in receiving a communication signal from the remote transceiver, wherein said direction determination unit includes means for analyzing signal portions received by individual antenna elements within said array of receive elements to determine the direction of the remote transceiver.

6. (Original) The system claimed in claim 1, wherein:

said transmit beamformer includes a variable delay unit for each of said antenna elements within said array of transmit antenna elements and a controller to determine a delay setting for each variable delay unit based upon the direction of the remote transceiver determined by said direction determination unit.

7. (Original) The system claimed in claim 6, wherein:

said power control unit includes a controller to calculate said antenna gain related parameter based upon delay settings of said transmit beamformer.

8. (Original) The system claimed in claim 1, wherein:

said transmit beam generated by said transmit beamformer is approximately centered in the direction of the remote transceiver determined by said direction determination unit.

9. (Original) The system claimed in claim 1, further comprising:

an input/output interface to couple said system to a data processing device.

10. (Original) The system claimed in claim 9, wherein:

said input/output interface includes a serial data port.

11. (Original) The system claimed in claim 9, wherein:

said input/output interface includes a universal serial bus (USB) port.

12. (Original) The system claimed in claim 9, wherein:

said input/output interface includes plug-and-play capability.

13. (Original) The system claimed in claim 1, wherein:

said array of transmit antenna elements, said direction determination unit, said transmit beamformer, and said power control unit are each mounted on a common support structure.

14. (Original) The system claimed in claim 13, wherein:

said common support structure is adapted for desktop placement.

15. (Original) The system claimed in claim 1, comprising:

at least one variable gain amplifier to amplify a transmit signal before it is delivered to said array of transmit antenna elements during a transmit operation, wherein said power control unit controls the gain of said at least one variable gain amplifier to adjust the transmit power level of said system.

16. (Original) A method for use in wirelessly transmitting a communication signal to a remote location, said method comprising:

determining a direction of said remote location;

generating a transmit antenna beam in the direction of said remote location using phased array principles;

determining a parameter related to an antenna gain associated with said transmit antenna beam; and

using said antenna gain related parameter to adjust a power level of a transmit signal to be transmitted to said remote location via said transmit antenna beam.

17. (Original) The method claimed in claim 16, further comprising:

determining an average transmit duty cycle associated with transmissions to said remote location; and

using said average transmit duty cycle to adjust the power level of said transmit signal.

18. (Original) The method claimed in claim 16, wherein:

using said antenna gain related parameter includes adjusting the power level of said transmit signal in a manner that complies with mandated transmit power limits.

19. (Original) The method claimed in claim 18, wherein:

using said antenna gain related parameter includes adjusting the power level of said transmit signal to maximize said power level while not exceeding said mandated transmit power limits.

20. (Original) The method claimed in claim 16, wherein:

determining a direction of said remote location includes receiving an RF signal from said remote location and analyzing said RF signal to determine the direction of said remote location.

21. (Original) The method claimed in claim 16, wherein:

determining a direction, generating a transmit antenna beam, determining a parameter related to an antenna gain, and using said antenna gain related parameter are performed from a single indoor location.

22. (Original) A communication system for use in communicating with a remote communication entity, comprising:

an array of antenna elements arranged in a predetermined configuration;

an adjustable beamformer coupled to said array of antenna elements to generate a transmit beam in a predetermined direction in response to a control signal, said adjustable beamformer being capable of generating a beam in any of a plurality of different directions; and

a power control unit to adjust a power level of a transmit signal to be transmitted by said array of antenna elements based on at least one parameter associated with said transmit beam generated by said adjustable beamformer.

23. (Original) The communication system claimed in claim 22, wherein:

said at least one parameter associated with said transmit beam includes an antenna gain related parameter.

24. (Original) The communication system claimed in claim 22, further comprising:

a duty cycle determination unit to determine an average transmit duty cycle of said system over a predetermined time period, wherein said power control unit adjusts the power level of the transmit signal to be transmitted by said array of antenna elements based on said average transmit duty cycle.

25. (Original) The communication system claimed in claim 22, wherein:

said adjustable beamformer generates the transmit beam in the predetermined direction using conventional phased array techniques.

26. (Original) The communication system claimed in claim 22, wherein:

said adjustable beamformer is part of an adaptive antenna arrangement.

27. (Original) The communication system claimed in claim 22, wherein:

said power control unit adjusts the power level of the transmit signal so that a maximum allowed power level is not exceeded.

28. (Previously Presented) A communication system for use in communicating with a remote communication entity, comprising:

an array of dipole antenna elements arranged in a predetermined configuration;

an adjustable beamformer coupled to said array of dipole antenna elements to generate a transmit beam in a predetermined direction in response to a control signal, said adjustable beamformer being capable of generating a beam in any of a plurality of different directions; and

a power control unit to adjust a power level of a transmit signal to be transmitted by said array of dipole antenna elements based on at least one parameter associated with said transmit beam generated by said adjustable beamformer.

29. (Previously Presented) The communication system claimed in claim 28, wherein:

said at least one parameter associated with said transmit beam includes an antenna gain related parameter.

30. (Previously Presented) The communication system claimed in claim 28, further comprising:

a duty cycle determination unit to determine an average transmit duty cycle of said system over a predetermined time period, wherein said power control unit adjusts the power level of the transmit signal to be transmitted by said array of dipole antenna elements based on said average transmit duty cycle.

31. (Previously Presented) The communication system claimed in claim 28, wherein:

said adjustable beamformer generates the transmit beam in the predetermined direction using conventional phased array techniques.

32. (Previously Presented) The communication system claimed in claim 28, wherein:

said adjustable beamformer is part of an adaptive antenna arrangement.

33. (Previously Presented) The communication system claimed in claim 28, wherein:

said power control unit adjusts the power level of the transmit signal so that a maximum allowed power level is not exceeded.